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EXAMINER

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
6

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8 *Ex parte* KOICHI HAGIWARA and JIRO WATANABE
9

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11 Appeal 2008-002132
12 Application 10/006,568
13 Technology Center 3700
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16 Decided: August 18, 2009
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19 Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY, and
20 FRED A. SILVERBERG, *Administrative Patent Judges*.

21
22 SILVERBERG, *Administrative Patent Judge*.
23

24
25 DECISION ON APPEAL
26

27 STATEMENT OF THE CASE

28 Having had claims twice rejected, Koichi Hagiwara et al. (Appellants)
29 seek our review under 35 U.S.C. § 134 of the rejection of claims 1, 3, 4, 6, 7,
30 14 and 15. We have jurisdiction under 35 U.S.C. § 6(b) (2002).
31

1 SUMMARY OF DECISION

2 We REVERSE.

3

4 THE INVENTION

5 The Appellants' claimed invention is directed to the spraying from an
6 injection nozzle of a mixture of a pressurized gas, a pressurized liquid and a
7 granular material onto an object to be cleaned (Spec. 1, 7: ¶¶ [0001] and
8 [0007]).

9 Claim 1, reproduced below, is representative of the subject matter on
10 appeal.

11 1. A cleaning and releasing device for spraying
12 a jet flow onto an object to be cleaned, comprising:
13 an injection nozzle which mixes a
14 pressurized liquid and a pressurized gas in said
15 injection nozzle and injects the pressurized liquid
16 and the pressurized gas;
17 a pressurized liquid flow passage for
18 supplying the pressurized liquid to said injection
19 nozzle;
20 a pressurized gas flow passage for supplying
21 the pressurized gas to said injection nozzle;
22 operating means for supplying and stopping
23 the pressurized liquid to said injection nozzle, said
24 operating means being provided in said injection
25 nozzle or on the flow passage of the pressurized
26 liquid in communication with said injection
27 nozzle;
28 detecting means for detecting supply and
29 stop of the pressurized liquid generated by an
30 operation of said operating means, said detecting
31 means being provided in a position on said
32 pressurized liquid flow passage;
33 a switching valve provided in the flow
34 passage of the pressurized gas and serving to

1 supply and stop the pressurized gas to said
2 injection nozzle; and
3 a controller for controlling a switching
4 operation of said switching valve based on a
5 detection signal transmitted from the detecting
6 means;
7 wherein the controller opens said switching
8 valve based on a detection signal transmitted from
9 the detecting means so as to supply the pressurized
10 gas to said injection nozzle when the injection of
11 the pressurized liquid from said injection nozzle is
12 detected by said detecting means; and
13 wherein the controller closes said switching
14 valve based on a detection signal transmitted from
15 the detecting means so as to stop the supply of the
16 pressurized gas to said injection nozzle when the
17 stop of the injection of the pressurized liquid from
18 said injection nozzle is detected by said detecting
19 means.
20

21 THE REJECTIONS

22 The Examiner relies upon the following as evidence of
23 unpatentability:

24 Woodward	US 5,312,040	May 17, 1984
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26 The following rejections by the Examiner are before us for review:

- 27 1. Claims 7 and 15 are rejected under 35 U.S.C. § 112, second
28 paragraph, as being indefinite for failing to particularly point out and
29 distinctly claim the subject matter which applicants regard as the
30 invention.
31 2. Claims 1, 3, 4, 6, 7 and 14 are rejected under 35 U.S.C. § 102(b) as
32 being anticipated by Woodward.
33

ISSUES

The issues before us are whether: (1) the Examiner erred in concluding that there is a structural gap in claims 7 and 15 that renders these claims indefinite (App. Br. 12); and (2) the Examiner erred in finding that Woodward describes an injection nozzle that mixes a pressurized liquid and a pressurized gas as called for in independent claims 1 and 6 (App. Br. 15).

ANALYSIS

Rejection of claims 7 and 15 under 35 U.S.C. § 112

Appellants contend that claims 7 and 15 meet the requirements of 35 U.S.C. § 112 for definiteness (App. Br. 12). Appellants further contend that whether a claim is distinguishable from the prior art is not relevant to whether the claim satisfies the requirements of 35 U.S.C. § 112 (App. Br. 14).

The Examiner found that claims 7 and 15 contain functional limitations that are not commensurate in scope with the structural limitations claimed (Ans. 3, 8). The Examiner further found that “[w]hile features of an apparatus may be recited structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.” (Ans. 3, 9).

We agree with Appellants that whether a claim is distinguishable from the prior art is not relevant as to whether the claim satisfies the requirements of 35 U.S.C. § 112.

The Examiner’s position, as we understand it, is that there is a structural gap in claims 7 and 15, because they do not recite the specific structure by means of which the controller controls the supply and stop of the pressurized gas. It appears that the Examiner may be confusing claim

1 breadth with indefiniteness. A claim that is broad does not mean that it is
2 indefinite, that is, undue breadth is not indefiniteness. *In re Johnson*, 558
3 F.2d 1008, 1016 n.17 (CCPA 1977).

4 We find that a person having ordinary skill in the art would
5 understand the subject matter called for in claims 7 and 15. We agree with
6 Appellants that claims 7 and 15 meet the requirements of 35 U.S.C. § 112
7 for definiteness. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d
8 1565, 1576 (Fed. Cir. 1986) (holding that the test for definiteness under 35
9 U.S.C. § 112, second paragraph, is whether “those skilled in the art would
10 understand what is claimed when the claim is read in light of the
11 specification.”).

12 We thus conclude that the Examiner erred in rejecting claims 7 and 15
13 under 35 U.S.C. § 112, second paragraph, as being indefinite.

14
15 *Rejection of claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) as being*
16 *anticipated by Woodward*

17 Appellants contend that Woodward does not describe a device which
18 mixes a pressurized liquid and a pressurized gas, as Woodward is directed to
19 a device which supplies either a pressurized liquid or a pressurized gas (App.
20 Br. 15). Appellants further contend that Woodward supplies pressurized gas
21 61 to the nozzle 118 only in response to the pressurized liquid being diverted
22 away from the nozzle 118 to the dump 120 (App. Br. 16). Appellants still
23 further contend that Woodward does not describe the invention as called for
24 in claim 1 (App. Br. 16). Appellants still further contend that in Woodward,
25 (1) the residual liquid moisture referred to in column 7, lines 19-24 is liquid
26 that is left over after the pressurized liquid is diverted away from nozzle 118,
27 (2) that whatever residual moisture remained is not a pressurized liquid, and

1 (3) mixture of the residual moisture and the gas is not a mixture of a
2 pressurized liquid and a pressurized gas (App. Br. 20).

3 The Examiner found that Woodward (1) describes the structural
4 limitations called for in claim 1, and (2) has the ability to perform the
5 function of mixing a pressurized liquid and a pressurized gas in the injection
6 nozzle (Ans. 9). The Examiner further found that one of ordinary skill in the
7 art guided by the teachings in Woodward would recognize that a pump
8 malfunction while water is flowing through barrel 116 which resulted in a
9 pressure of 500 psi would actuate valve 14 to open inlet 22 and allow
10 pressurized gas to flow into barrel 116 resulting in a mixture of pressurized
11 water and pressurized gas (Ans. 9-10).

12 The ordinary meaning of the word “pressurize” includes “to put (gas
13 or liquid) under a greater than normal pressure.” THE AMERICAN
14 HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (4th ed. 2000).

15 We find that normal pressure is atmospheric pressure.

16 In order for a fluid or liquid to be pressurized, it must be of greater
17 than normal pressure, that is, greater than atmospheric pressure.

18 Woodward describes that when the jetting is interrupted, that is, when
19 the high pressure fluid stream 33 is directed to the nozzle dump 120, only
20 compressed gas 60 and some residual moisture from the diverted high
21 pressure fluid stream 33 is present in the nozzle 118 (col. 7, ll. 1-24; fig. 4).
22 Therefore, Woodward describes that the compressed gas 60 flows only in
23 the absence of the flow of high pressure fluid stream 33.

24 In Woodward, while the fluid is initially of high pressure, any residual
25 moisture present in the nozzle 118 would not retain that high pressure, that

1 is, the residual moisture would not be under greater than normal pressure.

2 Therefore, the residual moisture would not be pressurized.

3 Therefore, we agree with Appellants that in Woodward, a mixture of
4 the residual moisture and the gas is not a mixture of a pressurized liquid and
5 a pressurized gas.

6 Further, in Woodward, it is speculative, at best, as to whether any high
7 pressure fluid would still be in the nozzle when the compressed gas flows
8 through the nozzle 118 during a pump malfunction.

9 Therefore, since Woodward describes that the compressed gas flows
10 only in the absence of the flow of high pressure fluid, the Examiner has
11 erred in finding that Woodward has the ability to mix a pressurized liquid
12 and a pressurized gas in the injection nozzle.

13 Accordingly, Woodward does not anticipate claims 1 and 6. For the
14 same reasons, Reed does not anticipate claims 3, 4, 7 and 14, which depend
15 from claims 1 and 6, respectively.

16 17 CONCLUSIONS OF LAW

18 Appellants have established that the Examiner erred in concluding
19 that claims 7 and 15 were indefinite. Appellants have established that the
20 Examiner erred in finding that Woodward describes an injection nozzle that
21 mixes a pressurized liquid and a pressurized gas as called for in claims 1 and
22 6.

23 24 DECISION

25 The decision of the Examiner to reject claims 7 and 15 under 35
26 U.S.C. § 112, and claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) over
27 Woodward is reversed.

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REVERSED

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